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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,500	09/01/2006	Marc Bohner	LUS-16732	6538
40854 7590 06/17/2009 RANKIN, HILL, & CLARK LLP 38210 Glenn Avenue WILLOUGHBY, OH 44094-7808				
EXAMINER				
MARCO'ANTONI, PAUL D				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
06/17/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/598,500

**Applicant(s)**

BOHNER, MARC

**Examiner**

Paul Marcantoni

**Art Unit**

1793

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9/1/06 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 and 44-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 9/6/06; 9/1/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

35 USC 103:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-40 and 44-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rey Christian et al. US 2003/120351 A1 (listed as X reference on PTO International Search Report), Khairoun et al. '280 B2, Lee et al. '879 B1 or '594 B2, or Chow '187.

Note: Chow (US 5,954,867) and Bohner (US 6,642,285 B2) have been cited of interest but not used in art rejection.

All of the above cited references in the 103 rejection teach a composition comprising ACP (amorphous calcium phosphate) and the other claimed components in amounts overlapping the applicants' instant invention. The addition of the further additives are conventional additives and would have been obvious to one of ordinary skill in the art (See MPEP 2144). Control of particle size of particles or specific surface area is also within the one of ordinary skill unless applicants can show criticality for this particle size or specific surface area for the specified component. The addition of retarders or accelerators to cements is conventional and old in the art for controlling the rate of setting of the hydraulic cement.

The applicants are referred to the citations from the PCT International Search report for location of teaching (ie paragraphs 12-21,32-34,46-52, and 55-64) in Rey.

For Kharioun et al. they teach a amorphous calcium phosphate cement comprising phases of ACP (amorphous calcium phosphate) as well as alpha-TCP and TTCP in amounts overlapping applicants' instant claims (see claim 1, for example, in col.8).

Lee et al. '879 teach ACP and TCP together as a calcium phosphate cement composition (see claim 1 in col.41 and claim 4 in col.42). Again, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Lee et al. '594 B2 teach a calcium phosphate comprising amorphous calcium phosphate. This reference could be potentially overcome by inserting the limitations of claim 2 (applicants' claim 2) for the second phosphate into claim 1. Lee et al. '594 appear not to teach these specified phosphates.

Chow et al. "187 B2 teach a calcium phosphate cement comprising a combination or mixture of alpha tricalcium phosphate, betatricalcium phosphate, and amorphous calcium phosphate in amounts overlapping applicants' instant claims thus rendering it obvious to one of ordinary skill in the art (see col.14, claim 1, for example).

35 USC 112 Second Paragraph:

Claims 3-40 and 44-59 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

Claim 3 is indefinite because "preferably" is an indefinite term. Please delete it and consider an additional dependent claim including alcohols selected from the group consisting of ethanol or isopropanol.

Preferably is indefinite in claim 6 and any other claim it is used as well. Again, add two separate dependent claims to resolve this issue.

In claim 9, "an amount of" seems indefinite. Consider deleting this language.

The term "preferably" is indefinite in claim 12.

The term "preferably" is indefinite in claim 18.

The term "preferably" is indefinite in claim 20.

The Markusch language is indefinite in claim 23. Change "taken from the group consisting of--- to selected from the group consisting of---. Make this change from taken to selected from the group consisting of in claim 39 and 48 also.

The term "preferably" is indefinite in claims 32-36, 39,44,46,47,48,53,54, and any other claims missed by examiner using this term. Its use in claims is not proper. Please remove it in any and/or all instances used in claim.

The term CSH and CSD in claim 46 should be written out in long form so the abbreviations are well understood. Please write out the whole word in claim and delete abbreviation. This only applies to this claim and applicants do not have to worry about other abbreviations in other claims.

The term "such as" is indefinite in claim 47. Please delete it.

Claim 55 is rejected as indefinite as "use of claims" are not proper. Further it is rejected under 35 USC 101 because "use of" is not a statutory class of invention. Please amend to --A method of using the cement...--- to resolve said issue.

Please add an --A--in the preamble of claims 57 so claim reads --A temporary bone replacement---.

Please add the word ~~---The---~~ in preamble of claim 58 so claim reads ~~---The~~  
temporary bone replacement~~---~~.

In claim 59, delete "granules or blocks" and insert therefor --A granule or block--

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Paul Marcantoni/  
Primary Examiner, Art Unit 1793